Connacht Regional News

Traditiones et Spiritum Amateur Radio Servandum

Editor: ***Steve Wright EI5DD*** ***wright14@gmail.com*** **Vol. 1 Issue 7** **September 2022**

Welcome to the Seventh Edition of the Connacht Regional News Magazine

The Connacht Regional News Magazine is 100% *inclusive, unbiased*, and primarily written for the local Clubs and Groups in Connacht although there is a wealth of information that is of interest to all radio operators. More recently we have decided to include all aspects of Radio Communications and associated Groups. *Please Note:* We are *totally freelance* and in absolutely no way, tied into or affiliated to any one National Society. This enables us to report activities of *ALL* Radio Groups and Clubs in Ireland who wish to supply news items of interest.

It should be noted that, by taking a freelance stance, we are not favouring any Club Group or Society. If there is an absence of material from a Society or Club, it is because they did not supply material, *naturally beyond our* control.

We are fortunate that the West of Ireland has seven Radio Clubs within Connacht all of which are very active, as can be seen from their activities in our publication.

We do repeat forthcoming activities in several editions to give advanced notice of the event. To enable clubs and groups to prepare for them.

We promote >>ALL<< radio activities that are due to occur rather than report those that have happened. If you have an item of interest, please feel free to forward it to Steve. EI5DD, who will include it in the following newsletter.

Due to the overwhelming success and readership of the Connacht Regional news, now going viral, we will produce a publication MONTHLY.

A link may be found on the Galway VHF Group Web Page for the most recent copy of the Publication.

We Welcome Feedback so if you enjoyed this publication please mail Steve EI5DD:

wright14@gmail.com

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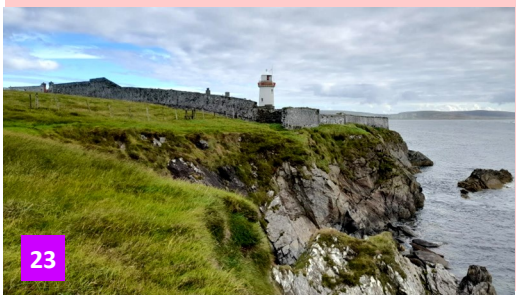
Submitting Items To This Magazine

We are always delighted to receive any radio related material for this magazine.

It does take time to lay out a publication so we have deadlines as in items should be submitted by the 26th of the month giving us plenty of time to prepare for publication.

Please E-mail us in advance so that space can be allocated.



Cover Image

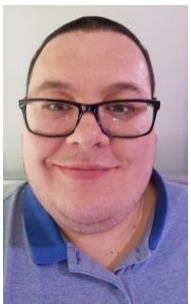
Keith EI5KN demonstrating Amateur Satellite Operation Via the International Space Station and SO-50 satellites

Views expressed in this publication do not necessarily reflect the views of the editor or those of the Galway VHF Group

News and Forthcoming Events

RSGB Region 8 Manager (Northern Ireland)

The team at the Connacht Radio News Magazine congratulate **David Parkinson, 2I0SJV**, on his appointment as Region 8 Manager for Northern Ireland. Region 8 is subdivided into five districts as follows: **District 81 (Co. Antrim)** John Campbell, MI0WJC, **District 82 (Co. Down)** Roger Bradley, MI0WWB ,**District 83 (Co. Londonderry and Co. Tyrone)** Trevor Campbell, MI5TCC, **District 84 (Belfast)** Sara McGarvey, 2I0SSW , and **District 85 (Co. Fermanagh and Co. Armagh)** Dave Parkinson, 2I0SJV representing his own district.



In addition we congratulate **Philip Hosey, MI0MSO,** the former Region 8 Manager, who has recently been appointed as the Special Interest Group Manager. The primary role of the Honorary Officer for Affiliated National Societies and Special Interest Groups is to champion their interests and to develop a closer relationship between them and the RSGB, and the amateurs they represent.

Join us on **Monday 5th September** when our Tonight@8 webinars make a welcome return after the summer break. Mike Richards, G4WNC goes 'Back to the keyboard!' and introduces the best data modes for keyboard QSOs. As well as explaining their operation and configuration, Mike will run through some operating techniques to take the strain out of keyboard QSOs.
youtube.com/watch?v=SC0UxNG2itE

Special 9/11 Event Marks 21st Anniversary

Members of the Alabama Contest Group will be carrying the message "Nine Eleven, Remembered Once More," during a special event being activated to honour the victims of terrorism who perished 21 years ago in New York City, Washington, D.C., and Shanksville, Pennsylvania. Stations will be using the callsign K4A starting at **00:01 UTC on September 8th and running through to September 12th**, operating on all bands and using CW, SSB, FT8 and RTTY. Organizers are expecting many hams to be calling in with stories of remembrances from September 11th, 2001.

Planners have been busy on the Discord chat app making a schedule that will be accessible to amateurs worldwide. An extra effort will be made on CW and FT8 to help Pacific DX operators, especially in VK and ZL, make contacts. Certificates will be available in addition to QSL cards. QSOs are needed on four bands in any combination of modes to qualify for a certificate. Outside of North America, only three bands are needed.

International Air Ambulance Week 2022

International Air Ambulance Week 2022 is a 9 day Amateur Radio event commencing on the **3rd of September**. By putting on a station you will hopefully help raise awareness of the work these dedicated people do. They need all the support they can get. We would hope and expect that more than one station will support the same Air Ambulance, the more support each one gets, the better. So, if you see your local service already listed as being supported by an amateur station, there is no reason why you cannot register your own station in support too. Please get the word out there so they can continue to be there if we need them.

The intention of this event will be to help support the donation funded flying medical services around the world, by operating your special event station during some of the 9 days during which this event takes place. The nine days to include two weekends, so everyone can get an opportunity to take part. Information and Registration details may be found here:www.radio-amateur-events.org/IAW/index.htm

Railways on the Air - September

Railways on the air (ROTA) weekend usually takes place every year on the weekend closest to the 27th September. This date celebrates the anniversary of the first steam powered passenger railway which took place on 27th September 1825 - the first passenger train ran on a line in the Northeast of England from Darlington to Stockton. The plan is to run it on **24th and 25th September 2022.** This celebration is not a contest. We organise this so that radio amateurs have a good time and promote Amateur Radio while helping to celebrate the unique position railways hold in our national heritage. **Registration:** When you have the details of the Station, register on this website so we can keep everyone up to date with the latest news. Once the event is over and you have made more than 10 contacts, please email a copy of your log to the address on the Contact page and we will send a copy of a special event certificate. Register here:
https://rota.barac.org.uk/register

Irish Net

Active not only on Sundays, but most weekdays starting at around **16:00 UTC, the informal gathering on 14.156 MHz** frequently suffers from QRM during contests and DXers unaware of this long standing net of North American operators with an Irish connection. In a recent contact on 20m with WI1IDP, QTH Tuscon Arizona, operator Jerry confirmed that the net now also uses the **17m band operating on 18.114 MHz**, avoiding the increased QRM on 20m and taking advantage of improved propagation conditions

News and Forthcoming Events

National HamFest / RSGB Convention 2022

As a result of the relaxation of COVID restrictions the RSGB will be holding a normal "in person" HamFest / Convention on the **7th – 9th of October** in the Kents Hill Park Conference Centre, Milton Keynes, MK7 6BZ Details about lectures and speakers will be announced over the coming weeks. The programme includes five streams so there will be something for everyone .AMSAT UK will joining them this year and will host one of the streams. There will plenty of equipment to

AMSAT UK Colloquium

AMSAT-UK is very happy to announce the 2022 AMSAT-UK International Space Colloquium will be held as part of the RSGB Convention on **October 8th - 9th** at the Kents Hill Park Conference Centre, Timbold Drive, Milton Keynes, MK7 6BZ. The weekend event attracts an international audience that ranges from those involved in building and operating amateur radio satellites to beginners who wish to find out more about this fascinating branch of the hobby. Booking for the RSGB Convention is at https://rsgb.org/main/about-us/rsgb-convention/ Details of the event can be found at https://amsat-uk.org/colloquium/

D60AE DX-pedition to Comoros October '22

The Radio Club de Provins, F6KOP - France will be organising he D60AE DX-pedition to Comoros (AF-007) from the **5th to the 17th of October 2022**. There will be 13 operators which will include Dave EI9FBB and Jeremy EI5GM. The operating QTH, at the Retaj Moroni Resort, is ideally situated close to the sea for excellent take off with ample space for antennas. The group intend to be active on all modes:

More info from:
https://comores2022.wordpress.com/

JOTA Advanced Notice 14th - 16th of October

Advanced notice for the forthcoming Scouts Jamboree On The Air which is an excellent opportunity for local Radio clubs and Groups to introduce amateur radio to the younger generation. If you have a local Scouts troop near you, why not introduce yourself and offer the facilities of your club station for the JOTA weekend.

Jamboree on the Air - Jamboree on the Internet (JOTA-JOTI) promotes a Scout's sense of belonging to the worldwide Scout Movement and builds cultural awareness, develops tolerance, advocates sharing and collaboration as well as demonstrates teamwork. It provides exciting opportunities for young people to explore technology and to develop technical skills including fostering innovation and creativity through communicating with other Scouts. A wide range of activities using communication technology are the chief methods of attaining these goals.

JOTA-JOTI strives for a meaningful engagement of as many young people from as many parts of the world as possible annually on the third weekend in October. This weekend is also an occasion to celebrate Scouting and to generate positive energy to support the development of the Scout Movement.

The event seeks to promote quality Scouting in a manner faithful to the purpose, principles and method of Scouting and consistent with the needs and aspirations of young people in today's world. The JOTA-JOTI programme shall be a reflection of the Promise, Law, Principles and Method of Scouting, as defined by the WOSM Constitution, and shall also reflect the most up-to-date policies and initiatives of WOSM relating to youth programme for all ages.

JOTA-JOTI is an annual event that takes place the third weekend of October. Future dates are: - **14th to 16th of October 2022.** For more information please visit the event website: www.world-jotajoti.info

RSGB Exam Syllabus Review Group

The Examinations and Syllabus Review Group (ESRG) has just completed an editing and checking exercise for all the v1.5 syllabus content on the RSGB website.

The single-tier and three-tier versions should have exactly the same content and (by majority request) Oxford commas have been removed. The old syllabuses can still be found at **www.rsgb.org/main/clubs-training/for-trainers/old-syllabus/** while the new syllabuses can be found at **www.rsgb.org/syllabus2019**

The Group has also been working on the sample examination papers and sample questions on the RSGB website in order to bring them into line with v 1.5. As the majority of candidates will now be taking examinations online (as opposed to paper-based exams) the front sheets of the sample papers have been adapted to reflect this transition. The sample questions are now shown using an Excel spreadsheet rather than being a pdf.

The updated sample examination papers can be found at **www.rsgb.org/mock-exams**

News and Forthcoming Events

ICOM Announces the SHF Project IC-905

ICOM has announced an exciting industry first at the Tokyo Hamfair, which opened on 20th August 2022. Based on its SHF project, the **IC-905 VHF/UHF/SHF SDR transceiver** will not only cover 144Mhz, 430Mhz, 1200MHz, 2400MHz, 5600MHz but 10 GHz* as well. (*Optional CX-10G transverter required)

Icom has published a video and pre-release document to coincide with the launch at the show, which you can view here:

- Watch IC-905 VHF/UHF/SHF SDR Transceiver Video.
- Download IC-905 VHF/UHF/SHF SDR Transceiver Pre-release Document.

As to the launch date and pricing, we don't have those details yet.

Would You Like to Promote Your Club and its Activities?

Is your club planning an event in the next month?

Are you planning a club activity?

Are you setting up a new Repeater or Gateway?

Drop us a line or two and we will include your item in the Connacht Regional Newsletter

Goonhilly – the station supporting Nasa's Artemis moon mission from Cornwall

History-rich communcation centre in Lizard peninsula will track the rocket using its Merlin antenna

Naturally, mission control in Houston and the Kennedy Space Centre in Florida are the places most closely associated with Nasa's Artemis 1 moon adventure but a lesser-known spot on a remote heath in the far south-west of Britain is also playing a crucial part.

When the mission does blast off, hopefully later this week, scientists at Goonhilly Earth Station on the Lizard peninsula in Cornwall will help Nasa track the rocket using a giant deep space antenna nicknamed Merlin, and then command six small research satellites that are piggybacking a ride on Artemis.

It will be a big moment for Goonhilly, which was on the brink of being closed for good in 2006 after four decades of service, and a huge boost for Cornwall's burgeoning space industry.

"We're very excited," said 23-year-old Beth Sheppard, a University of Oxford graduate rejoicing in the job title of deep space network mission operations engineer, who is one of those in the hot-seat at Goonhilly control. "We can't wait to see it go up and it will be quite a moment when we receive signals from it."

Sheppard is from the Cornish seaside town of Hayle and can't quite believe she is making a living as a space engineer in the place she grew up. "I feel a great sense of pride. Cornwall's a unique place and this helps to put us on the map."

Read the full and fascinating article at https://www.theguardian.com/global/2022/aug/30/goonhilly-the-station-supporting-nasas-artemis-mission-from-cornwall?CMP=Share_AndroidApp_Other

40 Metre Beam

Described here, is a 40-metre wire beam for those Experimenters who may not have the space for an 80-metre version but have the passion to pursue their interest in radio experimentation, propagation, antenna improvements, and spectrum purity and furthering that goal to near perfection as possible. Experimental radio is far more than just a hobby.

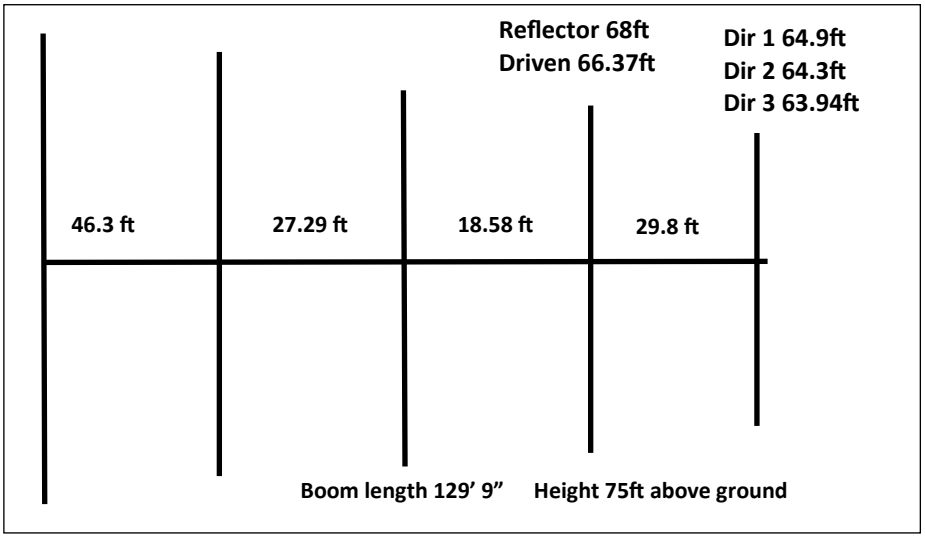


Fig. 1 A 5 Element Yagi Antenna for 40 metres (7.145 MHz)

The 40-metre beam is scaled down by ratio in the first instance from the 80-metre project, modelled and finally tried and tested so far to 3 elements of the system

This beam is working well already on the east coast of Canada, the USA and South America/Caribbean. It has worked long path to Jordan and Indonesia and contacts have been made Westward this month from 21:30 onward to 01:30 on 40 metres. The power level nominally 400 watts has been reduced to 200 watts during contacts before stations on the other side began to lose the transmissions the evenings. This will improve as the earth's shadow extends sooner on our trajectory around the sun towards the shortest day in December. Grey Line effect.

These contacts have been sporadic so far and not consistent mainly due to atmospheric noise/solar, and also no one is there on the other side at times when there is propagation. By listening to various SDRs on the east coast the signals are getting across.

The reception was both on the 3 elements already up and also on the West going 1000ft Beverage described recently.

The figures for the 80-metre beam and various diagrams are very similar only the size is different

A 1:1 Balun is used in the driven element **fig. 2** There are two booms in the 80-metre beam; one for the driven element and one for the reflector. Both can be moved on pulleys in or out from the driven element.

Fig. 2 3KW 1:1 Balun

The 40-metre Beam is installed on the same Kevlar Booms as the 80-metre wire beam and has had no effect on the 80-metre system at all so far.

From physical measurements, it currently delivers approximately 3/4dBI forward gain and reasonable F/B rejection of approximately 10/152dB which makes a difference.

As local propagation fades away this beam comes into its own across the Atlantic

The antenna is pointing to 280 Degrees. The balun is rated 3 KW to take care of a high SWR, EMP from nearby by lightening and possible contest working.

The elements are 2 mm, hard-drawn copper, for reasonable frequency excursion.

Installation of the driven element is separate to and below the 80m metres driven element. It is not strictly necessary to use a separate feeder or balun.

The next element added was the first parasitic element. This was duly spaced and pruned so as to keep the feed point at 50 Ohms. Once completed, the Reflector was added, and the same procedure was observed.

On every change the 80-meter system was also rechecked for any changes. Measurements were taken on the feeder and at 60 wavelengths at 280/100 degrees i.e. front and back where there is a convenient parking location for the vehicle and test gear. The test gear is an IC-7100 and a note pad and the station is keyed up in RTTY mode via remote at just 10 watts of RF carrier. This is of course just a reasonable approximation of gain and F/B figures but proving very useful.

One single Balun could be used successfully to drive say a 160, 80, 60, 40 metre System if the space permits

Not all would have to be multi-element as one can easily see, a mix would successfully work very well as in any Yagi-style antenna

For instance, 160 meters could be simply a driven element or dipole as could the 60-meter antenna be a one or 2 element item or more

The advantage would be a more economic high quality single feeder and just one balun, one boom and all antennas at a decent height AGL

Michael Higgins EI0CL
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A Radio Holiday in Sunny Roscommon

As I write this article the holidays are coming to an end and everyone is concerned about getting back to school or work. I really enjoy the holidays and as often as possible I drive to Roscommon to a cottage and spend a while operating radio with a couple of friends.

We have a few radios to choose from and each has it's own advantages. Antenna wise, we chose the DX Commander vertical on 3 bands. It only has 2 elements, 40m and 20m but the 40m element works as a 5/8 wave on 15m. The radios are a Yaesu FT-950, a Yaesu FT-817 and an Icom 7300. We do operate some voice but yours truly prefers CW so that is the main mode.

The FT-950 is a fantastic radio for CW. It has a tuning bar to help you fine tune the signal and once you are tuned in the filter can go down to 100Hz which is great for QRM. It also has five memories of which I only use one for CQ and maybe when I'm filling in the log a 73 and a QRT message. It has to be my favourite rig as I've had it for nearly ten years and it's never let me down. The FT-817 is a lovely radio to use but it's advantages are more for portable use. It is also missing a CW filter although it's easy to purchase one from the likes of Sotabeams in the UK. The sound from the speaker is a bit weak and tinny.

A pair of headphones is a must. The Icom 7300 is a best seller and it's no wonder. It's a true SDR radio and a quick glance on the screen and you can see the whole activity on the band. It has an auto tune for CW and a 250Hz CW filter. Like the FT-950 it has an automatic ATU but not required as the antenna is resonant on three bands.

There are three important things to make it a successful radio holiday: Drink, food and heat. We treat ourselves to roast duck, sirloin steaks and fine wine. We also enjoy a full Irish breakfast and once we're fed and watered and have the fire lit, it's time for the radio. Two of us are die hard Linux fans and there's not a Microsoft box in sight. We use Cqrlog and it really makes things easy for us. I've an article coming up soon about using Linux in the Ham shack.

We did try FT8 on one occasion, but it never really pulled any strings for us and we gave up on it. On our first night we heard Indonesia on 15m SSB, but we didn't work him as there were far too many in the pile-up and we only had 100W, but we did enjoy listening to him work the world. We heard him work South Africa and the Caribbean even though the K-Index was above four. Slowly but surely cycle 25 is coming alive.

One week isn't enough but we do plan to go down again soon. It's great to operate somewhere where there is no RF noise and no neighbours to complain about RFI. We do have plans for an 80M antenna, possibly either a Dipole of an End fed long wire.

A problem we did have was a poor mobile phone

connection. We would have to go outside to get reception. So we bought a mobile phone repeater from Novatel in Cork. It's a Stelladoradus brand designed and built in Waterford. We installed (Actually John EI6HJB) a small dish on the chimney and the repeater and another dish in the living room. It made a massive difference and can even boost the signal from two different networks at the same time as long as they are on the same mast.

We had another interesting issue. About a year ago I bought an TinySa. Its a spectrum analyser the same size as the NanoVna and has an internal battery and works from 50Hz to 900MHz. I was seeing a small spike on 437MHz. When I removed the antenna, it would go away so it looked like an external signal. We thought it could have been the keys of my car, the tyre pressure monitors on the car and even thought it might have been a satellite signal. It was -90dbm so it couldn't be received on a receiver. For months on end, we wondered where this signal might be coming from. We even left the car and my keys, watch and mobile phone behind and drove about 5KM away and it was still there.

Then one night whilst drinking a glass of whiskey I said,

"Have we calibrated the TinySA"? Of course not, that would be too easy. As soon as we calibrated it the signal disappeared. That's all until next month. 73 Mick MI0HOZ, EI9KI.

Micheal Na bPiob - MI0HOZ

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Shack Notes

Don't Blow up your DVI Chip

Yaesu decided it would be a splendid idea to produce video output from their FTDX10 and FTDX101D/MP though oddly they thought that a DVI video port was the way to go. Unfortunately, hardly anyone has got a DVI monitor these days, so many folks get HDMI adapter cables. These often have built-in electronics in order to do the conversion.

And that is where it can go horribly wrong....

1) Some folks have no problems and all works well

2) The HDMI cable draws too much current and the DVI chip in the radio goes pop (there's no safety fuse).

3) The HDMI monitor or TV sends signals (voltages) down the HDMI cable, which the DVI port doesn't expect. The result is the same as item 2 above.

Yaesu have stated specific cables which 'should' work, but the main recommendation is completely incorrect, as the cable has a mini display port plug, which doesn't fit anything.

One trick is to absolutely NOT connect the HDMI cable to a socket marked ARC or ARQ, as both of these send control signals and voltages.

Finally, the resolution is a bit odd and despite me trying various adapter cables, I can't get the DVI output of the transceiver to work with a Mini Display Port input on an old 27" iMac.

I have had success with a modern 55" TV using a port marked HDMI 1 Input and a DVI to HDMI cable, but others may not be so lucky.

I'm stunned that Yaesu haven't brought out their own 'special HDMI cable' at only €100

Does your Radio Shut itself down every time you speak into the microphone?

An interesting fault occurred when I pressed the PTT on my radio and I tried to put out a call.

The Radio shut down immediately I spoke into the microphone and drew current. After a couple of times it was time to contact Martin Lynch's Service Department and inform them that I was going to send them a radio for repair .

Having described the fault, I was informed that there may be a simple answer to this problem which should be tried before going to the trouble to send the radio for repair.
It was suggested that I remove the fuses from their holders and clean them and the holders thoroughly with iso-propyl alcohol. In addition clean any connectors to the power supply in the same way. For good measure if there was an inline connector going into the back of the radio clean those contacts too.

I carried out this task, switched on the radio and the fault had completely disappeared. Over time slight corrosion may occur on the metal surfaces of the inline fuses and on the pins of connectors.

Problem solved!

David Monk O'Brien - EI7KN

Getting The Best From Your Handheld Radio

Choosing a handheld radio as your introduction to VHF and UHF operation will end up with disappointment. Many handhelds on the market, have good receivers and receive the local repeater at a good readable signal strength and yet most of your received signal reports are poor or "scratchy". Why? The Repeater is transmitting at least 5 times the power output that your handheld is capable of running, it is situated on a high unobstructed site and has an antenna giving at least 3dB of gain thereby effectively doubling its effective radiated power and if it is running a 4 stacked dipole array then it would be quadrupling the effective radiated power. Such repeater antennas will also be beneficial for reception of weaker signals for the same reasons due to the antenna gain.

With a line-of-sight path from you to the repeater there should be no problems receiving a good report. If you are receiving a signal at less than full scale, and there are obstructions in the path between you and the repeater, there will be a resultant poor reception by the repeater. The only way to remedy this is to move to a higher location with a line-of-sight path to the repeater.

Re-orienting the antenna from horizontal to vertical will play an important part as repeaters transmit and receive with vertical polarisation. If your antenna is horizontal whilst transmitting or receiving, then the signal will be attenuated.

Other problems noted is that using the handheld radio indoors will require you to move around to get the best reception which may be close to the window. If out on the street, moving by as much as 2 feet in any direction may result in a jump in received signal strength. These black spots may be down to multi-path reflections or cancellations of the signal encountered when operating mobile.

Sadly, your handheld is running a maximum power of 5 watts running into a "rubber duck" antenna supplied with the radio which does not come close to a perfect resonant ¼ wave antenna. Bear in mind that most cheaper handhelds transmit on a wide range of frequencies so it will be difficult to have an antenna that will suit all bands so the "rubber duck" antenna will be a compromise.

The anatomy of the "rubber duck" antenna is down to taking the resonant length of wire at say 2 metres and winding a coil with many turns using the length of wire, normally 19.5 inches on 2 metres. A connector is soldered to the bottom and the coil of wire is encased in plastic or rubber as in **fig. 1**. Obviously, this is going to be a compromised situation and you cannot really expect any better.

As described earlier the "rubber duck" antenna is flexible and will not break easily. A telescopic whip antenna will break very easily and, more often then not, in the process of collapsing it down.

Fig. 1 The Rubber Duck Antenna Exposed

Try making your own flexible 1/4 wave 2 metre antenna from a 19.5-inch length of plastic covered wire curtain rail

Fig. 2 flexible plastic covered net curtain wire

fig.2 . This would be the type that is used to support light net curtains. Be sure that there is a metal wire underneath the plastic outer coating – some are filled with plastic. Strip back approximately 0.5 inches of the plastic coating and solder the piece of exposed wite to the centre pin of an appropriate connector for the top of your handheld. In some cases you will not need as much as 0.5 of an inch exposed. From the back of the connector measure 19.5 inches and trim. You now have a good 1/4 wave antenna for 2 metres which is flexible and will not break. It would be easy enough to find a small piece of plastic to seal the trimmed top of the antenna.

A slightly more expensive alternative would be to purchase a Diamond SRH77CA **Fig.3** dual band antenna with appropriate connector for your radio.

Fig. 3 The Diamond SRH77CA flexible antenna

Both the homemade and the Diamond antenna will produce immediate results with stronger signal reception and improve your transmission.

If operating from home, try connecting a Mag-mount antenna for the desired frequency. The magnet can be sat on a metal surface such as a filing cabinet or refrigerator. If using in the car the mag-mount antenna would be the normal antenna for use mobile. In the shack try hooking into the main station co-linear antenna or maybe construct a Slim Jim Antenna as described in this Magazine.

Another improvement to your transmitted signal would be to purchase an amplifier to boost your signal to 25 watts or above into the main station antenna .

Irrespective of which handheld antenna you decide to use try cutting a ¼ wavelength of a wire pigtail and attach it to the case of the radio where the antenna connects to the handheld radio as in **fig.4** (Next Page). This acts as a counterpoise for the antenna and will dramatically improve the transmitted signal.

Strangely, some handhelds are better than others and

Fig.4 Connection of a "pigtail" Counterpoise will often improve transmission and reception of signals on the handheld radio.

hand capacitance is sufficient, negating the need for a counterpoise. It will be noticeable if you pick up the radio and the received signal improves as soon as you hold the radio.

Avoid antennas such as those illustrated in **fig. 5** as these are little better than dummy loads. Yes, they do indeed radiate a signal but they do not come close to resembling a compromised quarter wave antenna.

These antennas are probably only really useful if you are running a digital hotpot or personal EchoLink or Allstar Node, in your house, and are running low power into something resembling a dummy load to prevent overloading the receiver on the hotspot. If you are not going to use an antenna for this purpose steer clear of them as they are total waste of money - Dummy Loads!

Fig. 5 These antennas are really not suitable for any type of operation from a handheld radio unless operating into a Hotspot or personal Allstar Node

On a final note, the handheld is not a great choice as a first-time radio. It is limited by its power output and antenna system. A reasonably priced mobile radio would be a far better choice where the power output is generally in the region of 50 watts, the receivers are normally very sensitive, and the antenna connections are generally PL259 or N-type connections. Such a radio would be suited to mobile operation, portable or base use.

Handhelds have their uses for portable operation if hillwalking, repeater operation and line of sight working.

From a hillside just west of Galway City, it has been possible to communicate with a station in Caslebar, Co. Mayo over a path length of 66 Km from my handheld radio.

I have worked into Wales using a 1/4 watt via a 19.5 inch set top antenna but my transmission was under an enhanced tropospheric condition – it would not be a common occurrence. Handheld radios are limited for coverage in densely populated areas. Having bought a handheld and then going to the trouble of buying an external amplifier is an expensive route when a mobile radio running more realistic power would be the better choice. Running a linear with the handheld defeats the object of buying a handheld radio in the first place.

A 2m Slim Jim Antenna Project

The Slim Jim antenna, originally designed by F.C. Judd G2 BCX a former writer for Practical Wireless, is basically a vertically polarised omnidirectional free space antenna which can be scaled to any operating frequency. For practical purposes it is easier to handle at frequencies from 30 MHz upwards. The radiation efficiency is 50% better than a conventional ground plane antenna due to its low angle of radiation and it does not require a ground plane. The Slim Jim uses a J-type integrated matching stub that facilitates feeding the antenna at the base, thus overcoming any problem of interaction between the feeder and antenna. The feed impedance is 50 ohms.

The Slim Jim is an end-fed vertically operated, folded dipole see **Fig.1**. As with all folded dipoles, the currents in each leg are in phase, whereas in the matching section they are in phase opposition. Little or no radiation occurs from the matching stubs. When correctly matched the VSWR will be < 1.5 to 1 and will remain so across the band.

The slim Jim can be used as a fixed station omnidirectional antenna or for portable operation. It could even be used for mobile operation.

Our version of the Slim Jim is going to be manufactured from 450 ohm Ribbon cable and using calculations from the **M0UKD website**. The advantage of the 450 ohm ribbon cable version is that, the antenna can either be mounted in PCV tube for a base operation or can be rolled up and stowed in a rucksack for portable use. Once on site the antenna could be unwound and taped to a fibreglass pole. In a matter of a few minutes.

See the rable in **Fig. 2** for our 2 metre version of the slim Jim with a centre frequency of 145.500 MHz

Construction

Goto the M0UKD Website https://m0ukd.com/calculators/slim-jim-and-j-pole-calculator/ and enter in your chosen frequency and press calculate. Your measurements will appear immediately. With regard to the Velocity factor, use the default value 0.9.

Cut the length of 450 ribbon to the length shown for **A** which, in our case is 141.2cms allow a little extra to short out the top and bottom end of the length. As long as the length is 141.2cms after the short at top and bottom we can proceed wit the rest of the antenna.

From the bottom of the antenna measure and mark the length Cand from the top measure and mark **B**. We can now cut the Gap **E**.

From the bottom mark the point **D** on both sides of the ladder line as this will be the feed point. I bared the feeder about 1/2 an inch either side of the feed-point and slid the feeder up and down until I got the best match. The actual measurement from the calculator was almost spot on.

Seal of any exposed areas on the coax cable with "Liquid Tape" , a kind of sticky rubber solution, or use a glue gun to prevent water getting into the coax.

A choke balun is recommended at the feed-point and this can be made by winding 3 turns of coaxial cable around a 40mm former (for the 2 metre antenna)or just taped and allowed to hang freely. This will prevent any radiation from the coax cable which would affect the performance of the antenna.

The polar diagrams in **Fig. 3** and **Fig. 4**, on the next page, illustrate the Slim Jim's improved efficiency over a 5/8 wave ground plane antenna. The Slim Jim's vertical radiation pattern is almost parallel to the ground. Note the radiation angle is 30 degrees. In **Fig. 4** the outer line is the

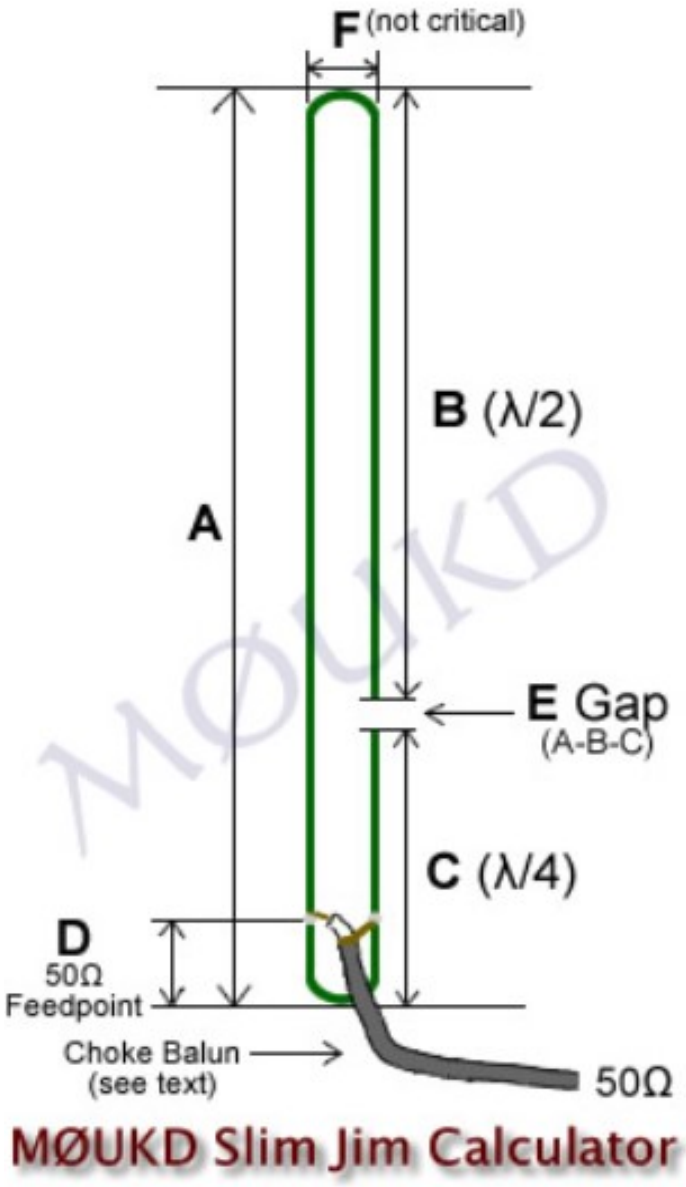


Fig.1 the Slim Jim antenna measurements see calculator

SLIM JIM AND J POLE CALCULATOR

Slim Jim / J Pole antenna calculator.	
Frequency	145.500 MHz
Velocity Factor (see text*)	0.9 vf
Calculate my Slim Jim / J Pole!	
Actual wavelength	2.06 metres
Wavelength considering velocity factor	1.86 metres
A. Overall length (λ*0.75)*vf (plus gap for Slim Jim)	139.2 cm (J Pole)
	141.2 cm (Slim Jim)
B. Half wave radiator section (λ/2)*vf	92.8 cm
C. Quarter wave matching section (λ/4)*vf	46.4 cm
D. 50Ω feed point. Adjust for 1:1 SWR. (λ/40)*vf	4.6 cm
E. Gap (λ/100)	2.1 cm
F. Spacing – not critical	4.5 cm

Fig. 2 The Slim Jim Calculator

omnidirectional radiation pattern from the Slim Jim compared with the 5/8 wave ground plane antenna with 6 radials which is illustrated by the inner line.

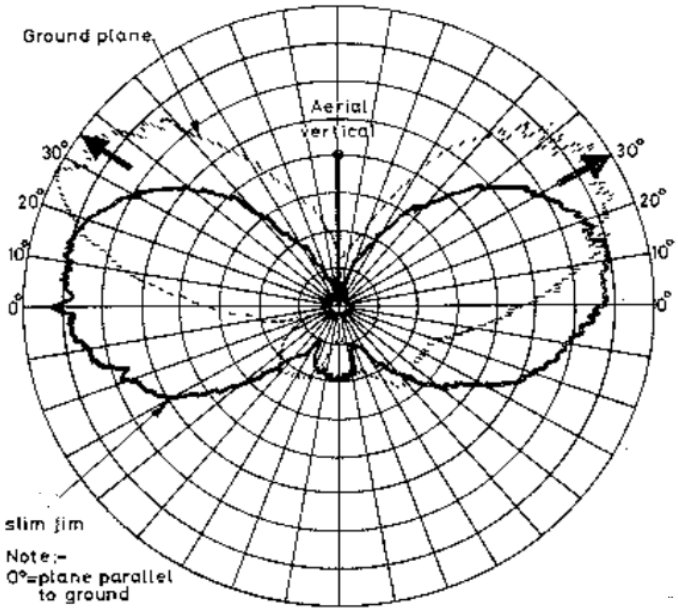


Fig. 3 Comparison of radiation angel of the Slim Jim Vs the 5/8 wave vertical antenna with 6 radials

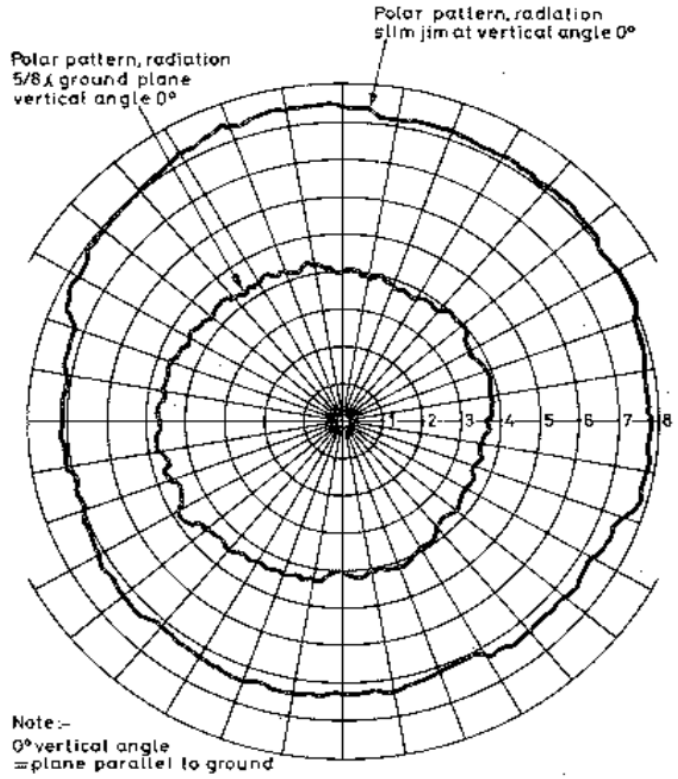


Fig. 4 Illustrating the omnidirectional radiation patterns from the Slim Jim and the 5/8 wave vertical antenna with 6 radials

The Slim Jim should be mounted as high as possible to take full advantage of its characteristics. It can be mounted in the loft and will work quite well. Mounting the antenna inside a PVC waterpipe will protect it from the weather.

The same M0UKD calculator can be used for designing the antenna from copper tubing. Brake pipe and gas pipe would be a suitable alternative material.

Securing the antenna to a Fibreglass pole with cable ties would be the ideal way to operate from a portable location or hilltop and ideal for use with the handheld radio.

It is possible to use the M0UKD calculator to design antennas for other bands and the 6 and 4 metre versions performed amazingly well although it is not practical to mount them in PVC pipe. The 4 metre version did last for about 9 months and then severe storm set in and the pipe broke. This probably would not be a problem if it was the shorter 2 metre version.

We occasionally use a channel in the business communication area for our EmComm events and the Slim Jim is ideally suited for this area. It costs very little to make such an antenna from 450 ohm ribbon feeder. We saw little value to purchasing special antennas for the number of times that we would be using it.

The Slim Jim was used as a temporary repeater antenna and did such a good job that we forgot to change it. For a long time.

The same M0UKD calculator can be used for designing the antenna from copper tubing. Brake pipe and gas pipe would be a suitable alternative material.

References:

https://m0ukd.com/calculators/slim-jim-and-j-pole-calculator/

Masonic Lodges on the Air - September 24

Masonic Lodges on the Air (MLotA), an amateur radio special event, will be on the air **Saturday, the 24th of September, 2022**, from locations across the county. The event is open to all amateur radio operators, and the idea for the event grew out of the realisation that many Freemasons also have a love for amateur radio.

The Fulton County Amateur Radio Club (FCARC) and the Fulton Lodge #248 in Ohio first hosted the event in 2021. Because of its success, the event has now been scheduled for the next 3 years.

The event will be operating K8BXQ from 10:00 AM - 6:00 PM ET, using SSB only on 80, 40, 20, 15, and 10 meters. Please honour all band plans. All contacts must be in the phone portion of the bands. Stations may be contacted once on each band.

Full contest rules and information can be found at cqmorelight.com/rules.

Bob Holstrom, KD2BKD, said that Masons in New York and New Jersey will be setting up stations at the historic museum grounds of The DeWint House, George Washington's Headquarters in Tappan, New York. The property is owned and operated by the Grand Lodge of Free and Accepted Masons of the State of New York. The special event call sign for that location will be W2QX, operating from 9:00 AM - 7:00 PM ET.

"Everyone is welcome to visit the historic DeWint house," said Holstrom. "The home has been restored and admission is free."

More information about Masonic Lodges on the Air can be found at their website, cqmorelight.com.

It's Not Real Radio - Chris Rolinson G7DDN

I was musing recently on the wonderful history of Amateur Radio, from the early pioneers with spark transmitters and the race to get the first signals across the Atlantic, up to the Microwave enthusiasts who developed the way forward for space communications and satellite technology (and, whisper this, mobile phone technology!)

The history of Ham Radio and RF technology is inextricably linked – there was even a time here in the UK where it was believed, anecdotally, that a Ham Radio callsign would help you to get a job with the BBC!

However change came very quickly, relatively speaking, in the early history of radio. From Marconi's experiments to the first Public Broadcast Stations was only 25 or so years. TV was only another 15 years or so behind that, and so on…

Resistance (or not feeling at "Ohm")

Yet the history of Ham Radio is also one of *resistance* to change – not from the pioneers, they were often instigators of it, but from the "everyday" Hams.

Let me see if I can give you some examples, with my tongue planted very firmly in my cheek…

"That's not Real Ham Radio!"

The early Hams used CW pretty much exclusively. So when AM arrived as one of the first of the voice modes, there was a bit of an uproar…*"It's not real Ham Radio! Real Ham Radio involves using a Morse Key! What in world is the hobby coming to, using voice to communicate over the airwaves? It's sacrilege!"*

But life went on, AM found acceptance and all was well in Hamland once again.

Then transistor technology arrived in the late 1940s and early 1950s, provoking quite a response. *"Hang on! That's not real Ham Radio. Real Ham Radios glow in the dark – we can't be having this miniature technology – they'll never last as long as valves or be as reliable"*

But life went on, solid state devices found acceptance and all was well in Hamland once again.

Then SSB arrived and there was *more* discontent… *"That's not real Ham Radio. Real Ham Radios don't sound like Donald Duck! It's a fad, it will soon fall away once people get fed up of hearing those silly voices"*

But life went on, SSB found acceptance and all was well in Hamland once again.

Then FM and repeaters arrived and there was polarisation within the hobby (and it wasn't horizontal or vertical either!) *"That's not real Ham Radio. Real Ham Radio doesn't need to use that thing on top of the hill to help your signal get somewhere! Real Ham Radio is point to point!"*

But life went on, FM & repeaters found acceptance and all was well in Hamland once again.

Then Packet Radio arrived and there was *real* trouble…

"That's not real Ham Radio. Real Ham Radio doesn't need one of those new-fangled computer thingies in order to work. Get your key or your mic out and start working other Hams properly!"

But life went on, Packet Radio found acceptance and all was well in Hamland once again.

Then Digimodes arrived and there was yet more strife…

"That's not real Ham Radio. Real Ham Radio doesn't involve typing messages to other Hams – and those perishing computers again! What on Earth are they doing in the hobby?"

But life went on, Digimodes found acceptance and all was well in Hamland once again.

Then Digital Voice modes arrived and there were some *very* serious disagreements…

"That's not real Ham Radio. Real Ham Radios don't sound like R2D2! Real radios don't use the Internet to help them get round the world, they ABSOLUTELY HAVE to use atmospheric propagation. What is happening to this hobby???"

But life went on, D-STAR and other Digital Voice modes found acceptance and all was well in Hamland once again. Then we arrive at today and Network Radios come onto the scene and all hell breaks loose!

"*That's not real Ham Radio. This is playing at Ham Radio – there's no Amateur RF so it is simply not Ham Radio. What is more, I worked hard for my license, everyone else should have to too! How dare people enjoy communications in an incorrect manner!"*

So will life go on and will all ever be well in Hamland again?

The 21st Century Challenge

This is why the advent of Network Radios represents such a challenge to us as Hams – it is causing us to completely rethink what it means to be a Radio Amateur in 2018 and beyond.

And we will have to start facing up to questions similar to these…

What exactly defines a Radio Amateur?
What do we mean by "Amateur RF"?
Is it RF generated by someone who is an Amateur?
Or is it RF generated on a particular band allocated to us by the government?
If so, does it absolutely HAVE to be that?
Can it be nothing else?
Does any of this really matter?

What about our bands?

As Hams we are very "attached" to our bands. Whether it be 160m or 2m, we almost have a psychological sense of "ownership" of them.

We have "favourite" bands, we have bands we *never* frequent.

We even have "our" spot frequencies and some Hams will get somewhat "assertive" if a fellow amateur who is not in their "group" *dares* to use "their" frequency!

And yet in the 21st Century, I believe that the whole concept of bands & frequencies is becoming ever more fluid. Why would this be?

An example from Broadcast Radio

Not that long ago, we could tune into broadcast stations on Long Wave (LF), Medium Wave (MF), Short Wave (HF) and FM (VHF Band II). Stations frequently referred to themselves by frequency: "247 metres Radio 1" or "1152 AM" for example. It was seen part of the station's identity – many had the frequency in their station names!

But today, we increasingly hear less of this. When you listen to broadcast stations these days, they seem to be eschewing giving out frequencies, instead they just announce that they are on "FM, DAB and Digital" or something similar to that.

Why? Because radio is something you probably increasingly consume in one of two ways – either digitally (via DAB or Satellite or similar means) or by streaming via the Internet. Frequencies and by extension, bands, are not as relevant as they once were.

Moving Out!

The large broadcasters are also increasingly moving away from "traditional" radio.

On Short Wave – only a few countries & various religious groups seem to operate there now. The big guys are moving out of Long and Medium Wave too. If commercial broadcasters are moving away, we need to ask why.

Do Bands matter?

I have a suspicion that this is, in part at least, because bands and frequencies don't matter so much these days. Domestic radio appliances are more about push buttons and screens that get you to your station instantly, rather than tuning dials with frequencies. It's the end product that is important, not necessarily the manner in which it gets to you.

Who tunes a modern broadcast radio in these days with a manual tuning dial? Anyone? It was the main knob on all radios not that many years ago! I can even remember tuning old VHF TV in with a dial in my early days on this planet – that *really* seems odd now!
Going one step further, many broadcast stations are not even using direct RF at all these days! We still refer to them as "radio stations" (or occasionally "Internet radio stations")

Is there any reason to think Ham Radio as a hobby will not invariably move in a similar kind of direction? One of our strengths historically as Hams has been that we are good at embracing new technologies and adapting them for our own uses.

The point I am leading up to is this – I suspect "bands" and "frequencies" are not really as big an issue in the digital age as we might *like* them to be.

In essence, bands only exist because of propagation.

Propagation again

160, 40m, 20m,10m, 2m etc. are all, in reality, "line-of-sight" bands. To over-simplify the subject, it is the ionospheric or tropospheric layers that enhance this line-of-sight propagation and turn it into something else.

Each band has differing propagation qualities as a result, giving each band its "character" and for some, the study of propagation in itself is a fascinating part of the hobby.

Man-made propagation is just different

When we think of (and use) the *Internet* as a man-made propagating medium (which is what it is – it propagates signals around the world) then the concept of bands becomes redundant.

The Internet is like one, almost infinitely wide, worldwide "band", constantly open S9+40 to all countries 24/7 with few vagaries – and not just for voice, but for vision and other digital modes as well.

Put like that, who wouldn't want to use it? Would it actually matter what "band" you were (or were not) on, if there even were one?

So the concept of "bands", by which so many of us define our activities, may be crumbling in front of us in this digital age and we may not even realise it yet! That is not to say our bands don't still exist, by the way – clearly they do. It is just that, to many people these days, bands are a foreign concept.

And then what?

As the hobby starts to come to terms with some of the implications of this, other issues then start to arise, such as…

Do we need an exam any more to get a licence?
Do we even need a licence?
What form or forms should it take, if so?
Might we see an influx of new people coming into the hobby because the entry to it is more straightforward?
How would we cope with that?
Do we even *want* new people coming in, especially if their views differ from ours?
What will the hobby even look like in 20 years time?
What happens to our "traditional" bands?

I expect to see a lot of discussion in the future about this – it's actually quite exciting!

Out of the Comfort Zone…

However it will make many of us feel extremely uncomfortable – the ground is shifting beneath our feet and the traditional raison d'être of Ham Radio is waiting to be challenged to change and adapt…

I don't see this as a bad thing – intelligent honest debate is to be welcomed. The most important thing is to keep our minds and our thinking wide open. We shouldn't reject something just because it is new or because it challenges our preconceived ideas of where radio is going in general.
Equally, we shouldn't throw the baby out with the bathwater and reject traditional Ham Radio as it has been for years. The Ionosphere and the Internet are complementary, not in competition.

My own opinion?

If you have read this far and you really want my personal thoughts…

Why can we not have the best of both worlds? Surely we can.

Network radios (at this stage in their development at least) are not contest radios for example, and the Internet is not yet a contest-friendly mode of propagation. (That might change of course!) so contesting is still best on the traditional Ham bands. I'll see you on 80 metres – 59 001 OM…

Continued on page 14 –/ —

Continued from page 13 –/—

However, regular reliable high-quality contacts around the world are but one thing Network Radios excel at, so why not just use that when you want to (or when the HF bands are full of noise or are otherwise dead)? I do! I don't see the expansion of choice in the hobby as a bad thing.

Enjoyment is the key

Does the fact that I am transmitting on cellular frequencies at 800MHz, 900MHz, 1800MHz, 2100MHz or on Wi-Fi on 2.4GHz or 5GHz matter? Is there something intrinsically evil about that? Is there more virtue in using 21 MHz or 432MHz, for example? They are just "frequencies" after all.

I prefer to see myself following the motto of my local radio club, "Having fun with RF". Whether I choose to use a Network Radio or a Yaecomwood super-duper base station is not as relevant to me. Enjoyment of the hobby is everything, otherwise why have a hobby?

Whichever way this debate goes and whichever direction this great hobby takes, my line would be to keep *all* the richness of *every* aspect of the hobby.

In other words, to go back to the title of this piece and change but one word, ***"It's ALL 'real' Ham Radio"***

© Chris Rolinson G7DDN
March 2018

EI4GCG - 4 Metre Allstar Gateway

The Galway City 4 Metre Allstar Node, EI4GCG, has been operating for the last couple of months its allocated frequency 70.425 and accessible using 77Hz CTCSS tones. The coverage seems to comply to the predicitons on the maps and is, on average a 25 Km radius around Galway City.

The Node is normally left connected to Node Number which links into the FreeStar network where there are many other Nodes connected along with bridges from all of the other Digital modes and including Internet Radios that are specifically connected to the FreeStar Network, Node 2197 for amateur Radio only use. This can be a busy are but is not clogged up 24/7 with activity. Place a call and you will always get an answer.

Operators are not confined to operation on Node 2197 and may disconnect any time and connect to a node of their choice. We request that you do disconnect from an existing connection rather than connect to another node, thereby unintentionally adding it to the FreeStar Network. When you have finished operating your node of choice, reconnect the Node 2197 for others to use.

If you do not have any was of connecting to the Allstar Network, there are methods of linking into the Freestar Node 2197:

From Hamshack Hotline:

#94107

#94040
#94099

From Peanut:

FRE325 (GB)

From Echolink:

Node 722751 ***FREESTAR*** (Conference)
Node 662666 **M0JKT-L** (Official)

From Yaesu's C4FM:

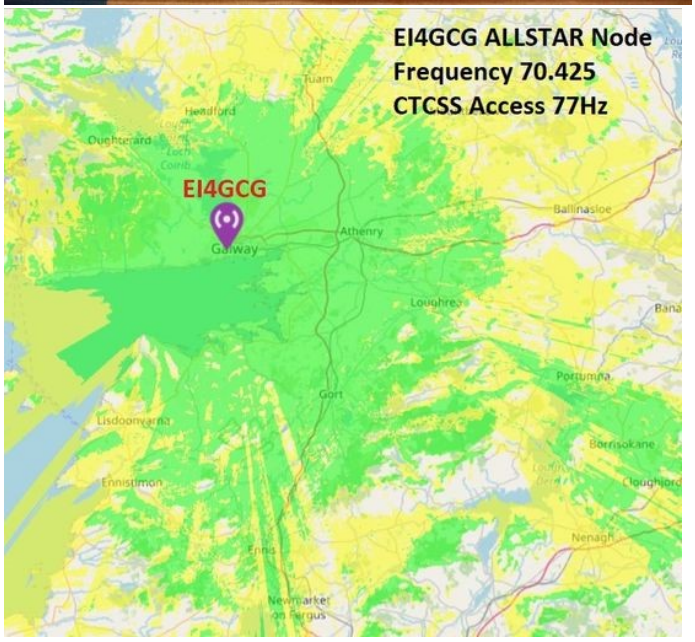
YSF 23426 **GB FreeSTAR** (YSF Reflector)
Wires-X Room 41729 **FreeSTAR UK** (Wires-X Network)

DMR+ IPSC2-Phoenix K & F:

Slot 1 (Phoenix K **Repeaters**) Talk Group **23426** (User Activated)
Phoenix F (Simplex / **Hotspots**) Talk Group **23426**

From D-Star:

DCS 248 **X** (D-Star)
REF 248 **X** (D-Star)



Allstar Commands

Connect to Node	*3 Node number
Disconnect from Node	*1 Node number
Force System ID	*80
Say System Time	* 81

Allstar commands always begin with *

Anyone for QRP?

Solder Smoke, the Podcast, is something I enjoy whilst languishing in the hot tub in candlelight and with a large glass of red wine. Total Informative Relaxation. Sprat Magazine, and Hot Iron are two publications that complement this podcast and between all three, QRP operation becomes more and more attractive and yet not too expensive on the pocket.

What Is QRP

The definition of QRP is transmitting with powers of 5 Watts or less on CW and 10 Watts on SSB. QRP is not just limited to CW and SSB but also weak signal modes such as QRSS, WSPR, JT68,and FT8 etc. Not only is operating at a reduced power level of interest but the homebrewing of equipment and antennas is one of the prime movers. As a result of the lower power levels morse code is the primary mode but not exclusively. Using Morse transmissions generally enables contacts to be made when it would not be possible using other modes.

Making contacts using low power transmitters may not reduce the signal levels by as much as might be expected. For example, reducing the power from 400W down to 4W output represents a reduction of 20dB. A figure of 6dB is generally taken to be equivalent to an 'S' point and therefore this power reduction represents a reduction of just over three 'S' points.

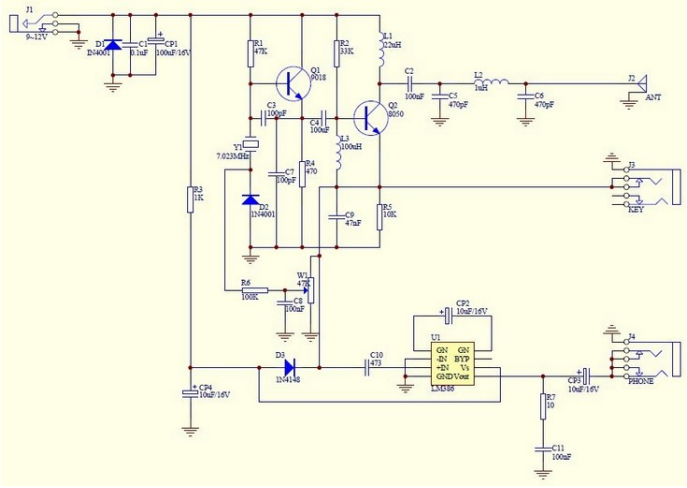
In other words, if a station running 400W (26dBW) was being received at S9 and it reduced the power to just 4W (6dBW), it would still be copied at around S6. While a QRP station might not be able to operate through many pileups, the figures show that it is still possible to make plenty of contacts. This is proved is reality every day on the amateur bands where many QRP contacts are made.

There are sections of all amateur bands accommodating QRP operation, designated centres of activity, thus avoiding competition with high powered stations.

Equipment for QRP Operation

There are many kits available, but the favourites are those that fit neatly into an Altoids tin such as the FOXX-3 and the PIXIE both of which feature in Sprat Magazine.

The Pixie QRP Transceiver



The Pixi Circuit

The Foxx-3 Transceiver

Both kits run from a 12V battery and will put out around I Watt. Just perfect to put in the pocket with a 12v Power source and a 20 m wire antenna on a small reel.

The alternatives are the Yaesu FT817, FT818, and the ICOM 705, and many Chinese SDR Radios but their prices far exceed the minimal outlay as previously mentioned. Whilst these radios may be somewhat superior, they do kind of defeat the ethos of true QRP operation.

BitX was, and still is, another popular series of QRP transceivers with the BitX 20 as one of the first produced and very reasonably priced. However, over the years the BitX range has evolved into surface mount technology where the main SMD board has been pre-built and the only task for the constructor is to add the peripheral components and put he whole lit into a nicely pre made chassis. It is well worth considering the BitX products. Nowadays they are becoming quite sophisticated.

The beauty about QRP is that it is not about highly expensive black boxes and can be enjoyed with very little outlay. There is a wealth of kits available from Kanga Products, Walford Electronics and QRP Radio Kits to name a few.

We will continue with a QRP section in future editions of this magazine. Hopefully this will trigger an interest into some homebrew construction of equipment and antennas and maybe even encourage some radio club projects and some portable activity.

A Sled Kite Antenna Support

Portable activity in the west of Ireland, Connemara or Burren areas is often limited by the antenna one chooses for the operation. There are seldom any trees to support the antenna and the use of 10 metre fibre-glass poles seldom holds the antenna high enough above ground. Antennas such as an Inverted-Vee or a top loaded vertical have been tried and given good results but were very much a compromise.

An antenna carried aloft and vertical by a kite would give better results than shortened loaded verticals or antennas located close to the ground. Kites supplied by toy shops are generally not large enough to be of use for lifting antennas also a single line kite is the only suitable kite for supporting long wires. Of all kites tested, the Sled kite was the most stable in flight and flies in light breeze conditions.

The Sled 24 kite has a surface area of 242 x 113cms and has a drogue at the rear which ensures that the kite is held into the wind thereby making it very stable. The Sled 36 has an area of 323 x 150cms and can lift even heavier loads. It would be a lot more difficult to manage in stronger winds. Special kite line is used with a specific breaking strain according to the size of the kite. Check the specifications of the kite before ordering kite line.

Antistatic box and Bungees cord attached to dog tether

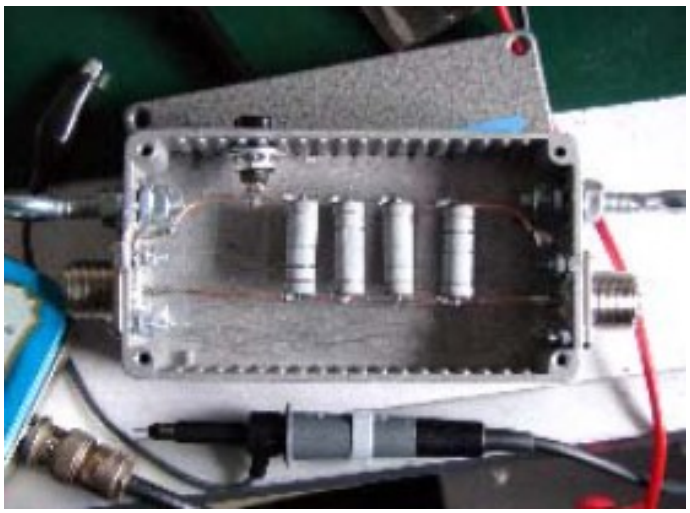
The next consideration is the type of antenna to be carried by the kite. Typically, a resonant quarter wave would spring to mind. This antenna would need a counterpoise or a good radial system underneath to get the best efficiency. A half wave end fed antenna would not need a radial system or a counterpoise system. A length of 135.56 ft would be perfect for 3.6 MHz operation as a half wave antenna and would be a multiple of half waves for the harmonically related bands. This antenna will show a high resistance on all bands and will therefore require an ATU to match it to the rig. The length would also be suitable as a quarter wave vertical on Top Band. A radial system would be required for the Top Band quarter wave vertical but unnecessary for the half wave or multiple of half waves on the other bands.

The antenna wire cannot be too heavy otherwise the kite will not carry it plus its line aloft under mild breeze conditions. The choice of wire was 1 x 0.75mm PVC coated multi-core copper wire. There are 5 strands of copper inside the PVC coating, and it is about as light as one can get. There have been suggestions that electric fence wire could be used but this has very fine wire intertwined with light polypropylene "string". This is not suitable as the fine wire can break very easily if stretched under tension. The sudden pull in a gust of wind would undoubtedly break this wire.

For 80 metres, a length of wire is cut to 135.56 ft and insulators fixed to each end. A short length of bungee cord is tied to the insulator and then tied to the point at which the flying line is attached to the kite. It is important to note that one does not fly the kite with the antenna wire as the breaking strain may not be sufficient to cope with the load of the kite. The wire should be allowed to hang vertically from the kite towards the ground.

The bottom end of the wire is connected via an anti-static box to an ATU. Located on the side of the box is a small wander socket where the box is connected to earth. The earth system used in, our case, was a copper clad earth rod, roughly 3 feet long, driven into the bog. Radials may be connected to this if necessary. In the case of rocky terrain, it is best to get as much earth rod into the ground and then add radials where necessary.

The antistatic box is connected to earth and its purpose is to bleed off any static electricity from the antenna to earth thus preventing it from damaging the rig or electrocuting the operator. It should be noted that the anti-static



Inside the Antisstatic box showing the bleed resistors

Continued from page 16 -/—

precautions should be in place before the antenna is carried aloft as the action of grabbing the antenna could prove painful if not fatal should a large charge have built up on the antenna wire. The damage to the rig could also prove more than it is worth to be complacent about the necessity to take steps to bleed off the static charge. It should be borne in mind that there is a potential difference between the ground and the air above it.

This potential difference rises exponentially with height above ground. The movement of air and even charged water droplets can produce a charge sufficient to jump across the gap of a spark plug. It has even been noted that bringing an 80-metre mobile whip from the horizontal position to vertical in rainy conditions may result in a nasty shock.

The construction of the anti-static box is shown. The resistors are large 5watt 1 Meg Ohm which will be more than adequate at power levels up to 200 watts. Do not use wire wound resistors as the inductance may cause problems. A bungee cord is tied to the insulator at the bottom of the antenna wire, and this is tied to the ringbolt on the anti-static box. The anti-static box is secured to a dog tether which is screwed into the ground. A small length of wire is taken from the bottom end of the antenna wire and plugged into the centre of the SO239, and a connection is made from the other side of the anti-static box to the ATU. The anti-static box is connected to the earth.

Once the kite is airborne it is manoeuvred to allow the antenna wire to hang down vertically. The purpose of the bungee cord at each end is to take the shock of any sudden movement of the kite thereby preventing the antenna wire from breaking. It should be noted that the kite is flown by the kite line and not the antenna wire. At his point the kite line can be tied off to the roof rack of the car. The only thing that remains is to tune the wire to the desired frequency and operate.

The results from this antenna have been impressive with many contacts made inside and outside of Europe. Both 80 and 40 metres have yielded good contacts into the UK with the beacon on 3.757 MHz being audible during daylight hours. Top band has tuned well on the antenna although at the time of day there was little to no activity heard. This is an easy solution to the problem in an area without trees. With several kites it would be possible to launch a horizontal dipole or even loop antenna into the air. A Delta loop antenna could easily be supported by the top of the triangle and feeding it at one of the bottom corners. It should be possible to support a dipole antenna with a kite at each end and one in the centre to take the weight of the feeder.

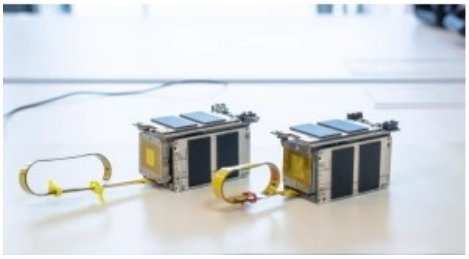
Nowadays, the end fed halfwave seems to be a popular antenna and would be ideally suited to this system.as it does not require a counterpoise. The end fed random length of longwire would require a counterpoise.

There is the possibility of hoisting up a 2 metre co-linear antenna tied to the kite but, unless, lightweight feeder is used it may be too heavy. I had described an inflatable halfwave vertical antenna for 2 metres which was fairly lightweight and with a some additional lightweight coax, it may be possible to bring this up to a good height

The only downside for this system is a perfect summer day may have no breeze at all and the kite will not lift

AMSAT-EA Satellites to Launch 11th September

Felix EA4GQS reports Spain's latest amateur radio satellites to launch will be GENESIS-G and GENESIS-J on the 11th of September



The AMSAT Bulletin Board post says

This is to confirm that the launch of our new GENESIS-G and GENESIS-J satellites with Firefly will take place, if all goes well, on September 11, with the launch window starting at 3 PM Pacific Time (22h GMT), from Vanderberg. The expected orbit altitude is 300 km with an inclination of 137 degrees.

As many of you know, this will be the second attempt of Firefly to reach orbit after the first attempt made in September 2021 and which had to be aborted after two minutes of flight, causing our previous GENESIS-N and GENESIS-L to be lost, among others.

These new GENESIS have a more powerful on-board computer than their predecessors and updated software that allows FM voice repeater functionality, AFSK/FSK non-regenerative repeater up to 2400 bps, FSK regenerative repeater up to 50 bps, CW, digitized voice pre-recorded FM and FSK telemetry at 50 bps. The correct retransmission of AX25 / APRS frames over FM up to 2400 bps has been verified in the laboratory.

A small drawback we still have is the antenna deployment mechanism, that is the first version that was made and requires a plenty charged battery. The satellites have been stored for several months, so it is a weak point. Hopefully it will work.

These satellites also have the names of ASTROLAND-1 and ASTROLAND-2 to say thanks to the sponsorship of the project by the Astroland Planetary Agency. We also thank the private companies and Universities that helped in the project.

As on the previous occasion, two experimental propellants are flown, although this time they are from the Madrid company IENAI Space and, unlike the previous GENESIS mission, they use a liquid ionic fuel. Only the one from GENESIS-J is functional. The one from GENESIS-G carries the electronics but without the fuel.

The frequencies coordinated with IARU are the following:

GENESIS-G/ASTROLAND-1

145.875 MHz uplink, Modes: FM voice (no subtone) and FSK 50 bps, AFSK, AX.25, APRS 1200 / 2400 bps

436.888 MHz downlink, Modes: FM voice, CW, FSK 50 bps, FM voice beacon with AM2SAT callsign

GENESIS-J/ASTROLAND-2

145.925 MHz uplink, Modes: FM voice (no subtone) and FSK 50 bps, AFSK, AX.25, APRS 1200 / 2400 bps

436.666 MHz downlink, Modes: FM voice, CW FSK 50 bps, SSTV Robot 36, FM voice beacon with AM3SAT callsign

Shannon Basin Radio Club

The EJ3Z team: Pat EI9HX, Brian EI8IU, Tomás (SWL), Keith EI5IN, Marty EI2IAB, Tom EI4HCB, Brian EI2II, Fergus EI6IB, and Anthony EI6GGB

Shannon Basin club members took to the sea and travelled to Inishbofin (EU-121) for the 2022 RSGB Islands on the Air contest over the weekend of July 30th & 31st. As with previous years, the eight-strong team used the islands national school as a base and set up camp there on the Friday. After all the antenna and radio equipment was ferried over to the island, the team spent most of Friday getting it all up in the air and in place.

Des (EI5GT) and Ronan (EI8HJ) joined the group and helped make short work of erecting a Hexbeam at the front of the school and an inverted-V antenna at the back.

Erecting the Hexbeam at the front of the school QTH

Des EI5GT and Fergus EI6IB erecting the Inverted Vee antenna

Shannon Basin Radio Club

After drying off from the drizzle, well earned food and refreshments were sought by the team afterwards which was a great way to round off the day. Suitably fuelled-up with full Irish breakfasts from the local hotel on Saturday morning, the contest team were ready for the start at 12:00 UTC.

Brian EI8IU operating as EJ3Z

The two stations on site – one operating SSB and the other CW began racking up the QSOs across the 10m, 15m, 20m, 40m and 80m bands. The club's callsign EJ3Z was used for the multi-mode 100W two station operation.

With eight operators in the team, it was reasonably straightforward to manage time on the key or mic.

Enda EI2II on the Key as EJ3Z during the IOTA Contest

Marty EI2IAB and Keith EI5IN taking the late-night shift as EJ3Z

Marty EI2IAB and Tomás (SWL) operating EJ3Z

In between contest activities, the team was active on 2m operating through the club's repeater on the mainland over 140km away as the crow flies. Keith EI5IN took the opportunity to demonstrate amateur satellite operation via the International Space Station and SO-50 satellites using his portable station. It proved to be a fantastic weekend of radio and fun. The club wishes to thank the Board of Management of Inishbofin National School for allowing us to use the school at the QTH.

Keith EI5IN operating 2m/70cm satellite and terrestrial portable

Shannon Basin Radio Club

EJ3Z's QSO map for the contest with stations worked in 57 DXCCs

When the contest concluded, almost 750 stations were worked - over 200 via CW and the rest using SSB. Conditions were mixed with no significant DX beyond 11,000km noted. Japan, Argentina, and Reunion Island were among the furthest contacts made. CW QSO distances edged out SSB especially during grey line propagation times (dusk mainly). Overall, the team worked 57 DXCCs over the 24-hour period.

Keith EI5IN, Fergus EI6IB, Brian EI8IU, and Tom EI4HCB on one of the hilltop sites on Inishboffin with Achill Island in the background

Forthcoming Club Activities

Shannon Basin Radio Club schedule of events continues over the coming months:

- **September 3rd:** SSB Field Day 2022. The location will be just outside Roscommon town.
- **September 4th**: Lough Rynn Harvest Festival station in Leitrim. This is a fun opportunity to introduce amateur radio to the general public and the club will be on hand to answer any questions about the hobby.

"Welcome aboard the International Space Station"

As many will be aware, the International Space Station has an active cross-band repeater and APRS (Automatic Packet Reporting System) digipeater on board. On July 26th, club member **Keith EI5IN** managed to have his first QSO with an astronaut Kjell Lindgren operating as NA1SS. It was a busy pass with NA1SS working several stations who got to hear "Welcome aboard the International Space Station" as part of the QSO. Opportunities like these can be rare and down to pure luck so if you're active on the satellites, keep listening out in case astronauts get a chance to pick up the mic again.

Shannon Basin Club Repeater

Shannon Basin Radio Club operates an analog repeater located on Sliabh Bawn in Co. Roscommon. The output frequency is 145.775MHz with the input on 145.175MHz. A CTCSS tone of 88.5Hz is required for access. The repeater is approximately 260m above sea level. The repeater covers a large part of the midlands and as far as east as Maynooth, the west, and northwest of the country. On a good day, it's possible to see Croagh Patrick over 100km away from the repeater site. All operators are very welcome to try it out as you'd be surprised how far QSOs can be made through it. It's generally very well monitored and used with a lot of mobile and portable users in addition to fixed QTH stations.

Enquiries and New Members Are Welcome

Further information about Shannon Basin Radio Club can be found at the club website https://www.sbrc.ie/ via their Facebook group, and by email to admin [at] sbrc.ie. Shannon Basin Radio Club has a very active membership drawn primarily from the midlands and west of Ireland but also further afield in the U.S. The club takes part in a very diverse range of amateur radio-related activities with an emphasis on fun, learning, and experimentation. New members are always welcome, and the club would be delighted to receive enquiries from anyone wishing to learn more.

Keith Nolan EI5IN
Shannon Basin Radio Club
PRO

Hillwalking Radio Group

On Saturday August the 27th Hillwalking Radio Club held our annual fundraiser and community walk, The Ramble near the village of Galbally which straddles the Tipperary Limerick border. This moderate walk to a Megalithic burial site about is 300meters of a gradual climb. The location is locally known as Darby's Bed and this walk has now become an annual event for our local community. The track coming back took in some stunning views of the Galtee mountains basking in the midday sun.

This walk is our annual bread and butter event which pays our insurance and CPR training, waterproof clothing and equipment. Our Alinco and Icom hand held radios are showing age and probably need replacing next year.

We were totally blown away by the generosity of so many people who came forward and offered to make buns, and brought spot prizes for our raffle. We have to thank our twin club, The Morning Ramblers for co-hosting the event for us and looking after the raffle and catering. Thanks to Eddie EI3FFB for setting up the equipment and folded dipole.

A site safety assessment was carried out during the week and any trimming back of briars and nettles was dealt with.

Our main safety channel was on 163MHz back to our support wagon. along with two hand held radios on 10 meters which worked surprising well considering the restricted length of the rubber duck antenna. We used 446MHz from the wagon back into the event manager in the community hall.

It is a wonderful feeling when the Community Council will pull all the stops to facilitate a small club such as ours. A new path was laid and hand railing fitted to make the entrance that much safer. Better still when they ask the question what's the next event?

HILLWALKING RADIO GROUP

hillwalkingradiogroup@gmail.com

Mayo Radio Experimenter's Network

Broadhaven/Ballyglass Lighthouse Activation

We completed our commitment to activate Broadhaven / Ballyglass Lighthouse North Mayo for Sunday 21st August 2022 the International Lighthouse Lightship Weekend – ILLW. The basic objective of this event is to promote public awareness of lighthouses and lightships and their need for preservation, restoration and at the same time to promote amateur radio and to foster International goodwill.

Setting off at 7am on a beautiful sunny Sunday morning it was a great pleasure that we the members of the Mayo Radio Experimenters network were delighted once again of the opportunity to set out for the Mullet peninsula to activate one of the lighthouse for the weekend that was in it 'The International Lighthouse Lightship Weekend – ILLW' especially this year 2022 as it was the celebration of the Silver Anniversary of the International Lighthouse / Lightship weekend! 25th year in existence.which is normally held on the 3rd full weekend in August.

Because of our location on the jagged West Coast of Mayo we benefit from a choice of a number of lighthouses that we can choose from, which are the essential lights to seafarers at night who travel up and down by our treccours coastline. This year we chose to activate a different Lighthouse from the usual Blacksod Lighthouse located on the south side of the peninsula for this occasion. Broadhaven/ Ballyglass Lighthouse located on the North side of the peninsula already had a ILLW number from it having been activated on a previous occasion by another radio Amateur.

Thanks to those that made the journey to Broadhaven to make the activation possible: Jimmy EI2GCB, Padraic EI9JA, Phil EI9KP, Tom EI4KY, and newly licensed amateur Eamonn EI7LC who travelled from Tuam, Galway to be there for setup. We arrived on site after 9.00am. We proceeded to set up the field day station for the occasion. Weather conditions were warm and calm giving rise to us being eaten by midgets. Three 10ft sections were coupled together with a doublet antenna attached, raised and secured then anchored at the North and South ends. Using an S.E.M. Z MATCH to couple the ladder-line to the ICOM IC-7300 which was powered by battery

Mayo Radio Experimenter's Network

day and a laptop for logging. We were ready to go on air well before the 11am IRTS news. Before we started we had open air breakfast and had developed a big appetite for it. We operated on different bands changing frequency as propagation and conditions changed all day long. All present had turns and times at logging and operating the station throughout the day.

The fine Sunday brought a lot of visitors to the area looking and photographing the rugged coastline and its beautiful scenery giving rise to traffic jams on occasions.

We had quite a few people enquiring about our setup and what its purpose was, even the satisfaction of seeing the joy on the face of a 10 year old lad whose name is ***Oisin*** speaks to another radio amateur who took the time to communicate with him in English for a few minutes. We are sure this would be the highlight of his afternoon.

We had a very good day all round and enjoyed the get-together as a club field day again, apart from the lumps we suffered from bites of the midges.

The Mayo Radio Experimenters Network will hold their next club meeting on Wednesday evening September 7th @ 9.00pm in the Breaffy House Hotel, Breaffy. Everyone is welcome to come along in the evening.

Galway Radio Club

Our Club Monthly Meetings:

The Galway Radio Club met in the Menlo Park Hotel for the monthly club night. It is generally held on the first Monday of every month, except if it is a Bank Holiday in which case, we meet on thesecond Monday of the month. We also support a virtual presence via. Jitsi https://jitsi.org/ which is generally a well-attended' The focus of our monthly club night is, as a rule, all things Ham Radio is about – learning about newthings, sharing information on what works (or doesn't work), showing new (or old) pieces of equipment and giving presentations/demo's where we can. Any "club administration" is handled separately by our committee and only bring to the Monday night meeting anything that the clubmembers need to be made aware of. Of course, Monday night club members can also raise questions/concerns/issues etc. to the committee.

Last Club Night:

Last club night (08-August), we covered a few different topics as well as a demo by Aengus (EI4ABB) of his DIY Magnetic Loop Antenna.

But first, we covered some housekeeping topics – namely a need for some additional volunteers for the upcoming Galway Marathon (13-August) and the looming 2022 Edition of the Winter Newsletter.

At the Galway Marathon, like other events the club support, the volunteers provide radiocommunications between the base station, fixed and mobile checkpoints to ensure the safety of the participants in the marathon. The Winter Newsletter (see the main page of www.galwayradio.com for the last 2 editions) has become a popular newsletter put out in time for the Christmas stocking!!!

So the call went out for articles of the newsletter.

On with the main show…

Antenna vs. Skip Distance

This is a topic that Aoife (EI8HOB) raised in the call, and it relates back to some work done with Paul(EI5IPB) and Aoife about 1 - 2 months ago. Back then, we spent about 1 - 2 hours in the evening onFT8, with Paul transmitting and Aoife receiving. Paul was using an ICOM IC-7300, with a vertical multiband antenna using about 15 watts of power on transmit. Aoife was using an SDR-Receiver, with a Raspberry PI running GNU Radio. Paul is based in Galway, Aoife in Sligo - about 111Km (or 70 miles) as the crow flies (or the radio waves fly . The work was on 10m, although some other bands were also tried. For both operators on all bands tried, receiving FT8 signals from around Europe and even as far as the East coast of the US was not an issue. Paul's transmissions were also being picked up around Europe and later that night into the US as well. However, Aoife could not pick up any signals from Paul.

This led to the conversation around Skip distance and how we can "calculate" or estimate what the skip distance might be for a particular transmitter/receiver. From the discussion, it was very clear that there is no simple "formula" to apply to calculate the skip distance, as there are a lot of variables that come into play - day vs. night, transmitter/receiver antenna setup, transmission power, radio rigs, atmospheric conditions, sun conditions etc.

Part of the conversation also referenced the use of radials on the antenna which is a factor in transmission, and this led to a reference to the MA5V Antenna which is indicated as not needing radials at all. Something that is important if space itself for radials is an issue.

Aengus (EI4ABB) indicated that he had some articles on skip distance that he will dig out and share with everyone. He also had notes from a lecture in the past (from Doug Charman?) that he can share as well.

From there, we then moved on to Earthing and good practises….

Correct Earthing Procedures

This is a topic that Damian (EI2HG) asked about as he wanted to get advice on good earthing mechanisms. He raised this as the connections to a previous antenna he had were "burnt" and believed that poor earthing might have been the problem.

Larry (EI9CN) provided some guidance in this area, which the Secretary did a terrible job in noting down. Here are the notes as taken and the intention is to try and get this expanded at some time in the future. Any errors in what follows is purely down to the Secretaries note taking skills and not Larry's teaching skills!!!

AC Earth:

This is where you bring the earth connection from all your shack equipment into a single earth point. In Larry's case, he has a small strip of copper - about 9'' wide by ~1'' high and very thin. He drilled about 9-10 holes in this strip and has bolts running thru' them. The earth connection of each shack device is connected directly to the bolts of this copper strip, and from there a thicker earth wire going to outside of the house. From the outside, the wire continues to copper bands wrapped around a copper tank buried in the back garden.

The copper bands are also soldered at various locations to the tank and the earth wire from the shack is in turn soldered to the copper band. This gives a very good earth.

The antenna tower is also connected to the same earth. Note that you do not have to have a copper tank buried in your back garden like Larry – you can get earthing rods in an electrical wholesaler, embed these into the ground with the top buried about 3inches between the surface so that no -one will trip over it. You can then connect your earth wire to the threaded top of the rod – again under the ground so no-one will trip over it.

A key message here that Larry emphasised a few times was that you do not "daisy chain" the earth from each device to the next one - each device must connect directly back to the common earth strip and from there to ground outside.

Safety Feature:

Another comment Larry made was in relation to safety and power to the shack. Larry has an isolation transformer providing power to all the shack equipment - including the wall sockets as well. These are separated from the house mains which means there is no direct connection from the house power supply to the shack equipment. This has a few benefits such as protecting against electric shocks and suppressing electrical noise for sensitive devices.

In addition to the isolation transformer, Larry also has an isolation switch that everyone in the house knows about. This one switch will, when triggered, cut all power to everything in the shack in one go. This is necessary to ensure that if there are any electrical issues or emergencies, there is a single place where all power can be disabled - no worries about looking at your fuse board and wondering which fuse will cut the power!!!

Because of the isolation transformer and the use of the AC Earthing as described above, the house earth is totally separate from the shack earth. ***Continued on Page 21 -/-***

Club Activities

Galway Radio Club Continued from page 20 -/-

Indeed, the flow to earth for the house is the same as any other house - it is not connected to the copper tank in the back garden!

RF Interference in the shack:

Another area that Larry mentioned was RF in the shack. This is where devices themselves in the shack can cause RF interference. Examples can be as simple as wired keyboards and mice, monitors, PC's etc. In fact, the author has seen a real example of a wired mouse on a PC beside the rig causing interference on one of the HF bands.

The solution to this is to switch to wireless where possible (e.g. wireless mouse/keyboard), and where not possible - use Ferrite Chokes/Cores wrapped around each wire. Larry has done a lot in this area and has been very successful in eliminating any RF interference from within the shack. Don't forget the antenna as well - this could do with some choking!!

Again, please note that the above was taken quickly and hopefully correctly. Any errors are those ofthe note taker and not Larry!

The above is a good starting point for your own research into Correct earthing and safety procedures.

And then there was a demo….

Demo: DIY Magnetic Loop Antenna

Aengus brought in a DIY Magnetic loop antenna along with various bits and pieces to provide a demo of what he made. Aengus also provided a handout which is a reprint of his article called "EI4ABB Shack Notes" on page 23 of the Winter 2021 Newsletter (see https://www.galwayradio.com/ for the link to the newsletter).

The antenna sparked a lot of interest - in fact we had to "shush" some people who were trying to get a good look at the antenna when Aengus arrived - we wanted to start the meeting!

Aengus described how the antenna was made - some curtain rail, a microbore copper pipe, a capacitor, a tripod and some ingenuity in putting it all together and there you have it! For more details, please see the article referenced above. A key point that this author picked up is that the outer loop is not in any way connected to the inner "coupling" loop – interesting!

We then tried to use the antenna to listen to any signals, but because we were in a hotel surrounded by rooms and fluorescent lighting etc., we could not hear anything. However, Aengus brought a small 5 watt transmitter (a uSDX HF Transmitter) and was able to use that to transmit a signal and demo the antenna picking up a signal from inside the meeting room.

After the meeting had ended, we all went outside into the car park where Aengus was able to pick up signals from further away. He showed us how to use the capacitor to manage the tuning, and from there do more fine-tuning on the receiver. It was a great demo!

At the end, we talked about our annual pilgrimage to Inisboffin for a week. This has been ongoing for 30+ years so a great time for all to get together and have some fun while also doing "radio stuff". We got some names for the trip from those attending the meeting and the secretary is going to email the members to see who else is going. It promises to be a very good week, and if the weather holds up like it did last year, then sun cream will be really, really, important!

Our next club night is 05-September.

73,

Paul EI5IPB.

Northern Ireland Radio Club Meetings

The Strangford High Frequency Enthusiasts Group is accepting UK-wide enrolments for the next UK Full licence training programme. They also use Google Meets on Monday evenings. It is completely free, email GI0VKP@gmail.com for details or see the QRZ.com entry for GI0VKP.

On Tuesdays **Carrickfergus Amateur Radio Group** meets in the Elim church, North Road, Carrickfergus from 7pm. All visitors are welcome. Info from gi0usx@yahoo.co.uk

Bushvalley Amateur Radio Club has a club net on Tuesdays at 8.30pm on 145.300MHz. On Thursday, the club meets at The United Services Club, Roemill Road, Limavady. Contact Jason, MI3UIW, via email to Bushvalleyarc@gmail.com

Dundalk Amateur Radio Society

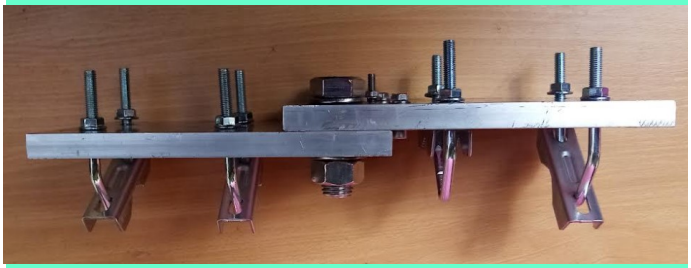
Dundalk Amateur Radio Society is based in Dundalk, Co. Louth Ireland. The society was established in 1969 by a number of like minded amateur radio operators from the Dundalk area. EI7DAR, EI0W, EI2MOG, EI2CCR, EI4FMG and EI7DKD are the amateur radio callsigns issued to the society by ComReg. The Society has its own clubhouse located on the Castletown Road in Dundalk, from this location they hold their monthly meetings and other amateur radio based activities. The next meeting of DARS takes place in their clubhouse at 8:30 pm on Wednesday the 7th of September

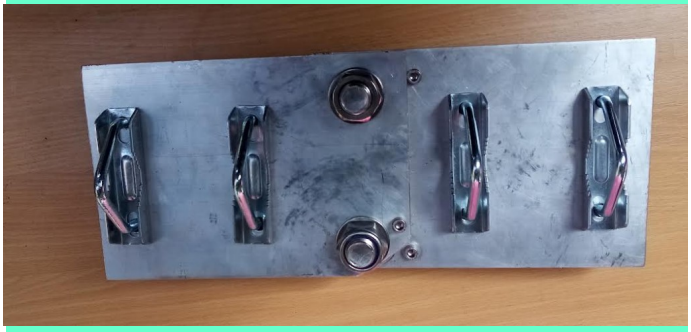
For Sale - Antenna Tilt Plates

Antenna tilt plates for sale **160 Euro** shipped via DPD within EI suitable for Hex, Cobweb and Yagi antennas that are on a tilt mast to make maintenance and repair easier. Overall 30mm thick aluminium plate design, each side of the plate being 15mm.With 30mm on its overlap with stainless steel pivot and nyloc nut hardware for added flexibility. With a set of dual heavy duty V clamps on the upper and lower plate allow for universal mounting onto a variety of masts and antenna stub masts which can accommodate mast and stub poles up to 50mm in diameter which are then secured into the V clamps by its clamp and Jaw hardware.

These are new and are handmade and never been used.

Contact: Charlie Carolan
087 6265418
or
charlie.carolan@gmail.com





RSGB Radio News Services From GI

10:00 3640KHz LSB Dungiven

12:00 TG2354 Time Slot 2 BM Network

19:30 TG 880 Time Slot 2 Phoenix Network

Shannon Basin's Automated Stations

Sliabh Bán Repeater O/P: 145.775 ,I/P :145.175, CTCSS 88.5

Roscommon Multimode Digital Gateway EI2BED 144.8625 MHz

Current Systems Active in Galway

70cm DMR Repeaters

EI7RHD	**I/P 430.450**	**O/P 439.450**	**CC1**
EI7LRD	**I/P 430.475**	**O/P 439.475**	**CC1**
EI7AKR	**I/P 438.425**	**O/P 430.825**	**CC1**
EJ7IBD	**I/P 430.500**	**O/P 439.500**	**CC1**

Yaesu Fusion Repeater

EI2KMR I/P 145.025 O/P 145.625 Wires –X

Gateways

EI2SHD	**144.8125**	**Wires-X Gateway**
EI2GCD	**145.850**	**P25 Gateway**
EI4GCG	**70.425**	**ALLSTAR node**

What is Waiting in the Wings?

1 x 70cm D-Star Repeater

1 x 70cm DMR Repeater completing the network to the South East.

Wescom Ireland Ltd

Visit the WESCOM Radio Shop
https://wescom.ie/

SolderSmoke Daily News

Serving the worldwide community of radio-electronic homebrewers.

http://soldersmoke.blogspot.com/

Providing blog support to the Solder Smoke podcast: http://soldersmoke.com

UK Six Metre Group

Dedicated to promoting 50MHz activity around the world

An Amateur Radio publication for the Microwave Enthusiast

scatterpoint

Published by the UK Microwave Group

ARRL

The National Association for Amateur Radio®

http://www.arrl.org/

EURA

EUROPEAN RADIO AMATEURS' ORGANIZATION

https://www.eurao.org/en/welcome

Dates for the Diary

Railways on the air 24th and 25th September

9/11 21st Anniversary 8th - 12th September

Comoros DX-pedition 5th - 17th of Ocotber

RSGB Ham Fest / Convention 7th - 9th of October

AMSAT UK Colloquium 8th - 9th of October

International Air Ambulance week 9th - 17th October

JOTA 14th - 16th of October

Bush Valley ARC, Limavaddy, Rally 6th November

RSGB

The Radio Society of Great Britain (RSGB) is the national membership organisation of amateur radio enthusiasts. The society was founded in 1913 and incorporated in 1926. The Society is dedicated to the development of the science and practice of amateur radio. It works to increase awareness and understanding of amateur radio and to make the hobby accessible to everyone. Amateur radio licences were issued to the first UK radio amateurs in 1934. The RSGB represents the interests of UK licensed radio amateurs and is a not-for-profit organization that:

- Promotes the general advancement of the science and practice of radio communication or other relevant subjects.
- Facilitates the exchange of information and ideas on these subjects among its members.

The RSGB aims to obtain the maximum liberty of action consistent with safeguarding the interests of all concerned. RSGB membership is open to all who have an interest in radio communications. The national governing body (The Board) is elected nationally. The regional governing body (The Regional Council) is elected on a regional basis. The day-to-day management of the society is under the control of a small team of full-time employees who are based at the society's head office in Bedford. *RSGB Membership is just £59.00 and this includes 12 monthly technical magazines.* Affiliate your club and get the opportunity for all members to log in and read the online publication of RADCOM, RADCOM Basics and RADCOM Plus as well as receiving a hard copy of the Magazine for the Club. Apply here: https://rsgb.org/main/join-us/join-the-rsgb/

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